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Running Head: A MARKETING PLAN

A Marketing Plan for an HMO

Diabetic Foot Disease Management Program

by

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March 2002

A Graduate Management Project

Submitted to the Faculty of Baylor University

In Partial Fulfillment of the Requirements

for the

Master of Healthcare Administration Degree

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#### Abstract

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PacifiCare of Texas<sup>®</sup> operates in an increasingly regulated and ever-changing environment. In order to provide effective and efficient healthcare to its beneficiaries, PacifiCare needs to undertake a marketing approach to the provision of care, including prevention programs. With an increasing diabetic population, and the rising cost of providing diabetic foot care, this market segment needs to be approached is a systematic way. The purpose of this study is to develop a marketing plan to address the needs of the diabetic market and lower the cost of medical care. A review of the literature revealed that a diabetic lower extremity prevention program could save up to 6.8% of total diabetic spending. A strategy to action marketing plan that addresses access, cost, promotion, and service development was developed. Market and internal data reveal that if a successful prevention plan can be implemented, diabetic lower extremity costs can be reduced over 7.5 million dollars in two years in the north Texas market alone. Finally, this marketing approach can be utilized to evaluate any potential project to improve services, reduce the cost of healthcare delivery and improve the overall health and well being of Pacificare's beneficiaries.

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### Introduction

The rise in managed care in the United States over the last several years has led to many changes in the health care delivery system. Two examples are the requirement for patients to obtain a referral from their primary care doctor and prior authorization from their Health Maintenance Organization (HMO) for specialty care. Although these mechanisms were successful in slowing the rise of healthcare costs, new methods are again needed to curb the double-digit increases in healthcare costs. More recent trends directed at increasing the quality of care are now becoming the method of choice to hold costs down. The theory is that by increasing the efficiency and effectiveness of medical care delivered, costs can be minimized. One such mechanism to increase effectiveness is the disease management program. Entrepreneurs have started numerous successful companies to market and sell disease management programs to HMOs and have been successful in reducing costs and improving outcomes. Health Maintenance Organizations (HMOs), including PacifiCare<sup>®</sup>, have already instituted disease management programs for coronary artery disease, congestive heart failure, chronic obstructive pulmonary disease, asthma, depression, diabetes and many others. The diabetes program at PacifiCare® has had success in better controlling blood glucose levels, however, no data exists to determine whether or not foot complications secondary to diabetes have not been impacted. The implementation of a diabetic foot disease management program may decrease the morbidity and mortality associated with diabetic foot complications. This study will develop a marketing plan that PacifiCare® can use to implement a focused diabetic foot disease management program to decrease diabetic foot complications.

# Conditions which prompted the study

Declines in financial reimbursement and the rising cost of healthcare delivery have led to numerous financially "at-risk" medical management group bankruptcies in Texas and around the country. Several capitated medical groups who had contracts with PacifiCare® have gone into bankruptcy, potentially leaving many thousands of patients without a payor for their medical care. In every instance, PacifiCare® has re-acquired the financial risk for those patients and begun paying doctors for the care they provide on a discounted fee-for-service basis. With the financial risk returned to PacifiCare®, they must continue to explore innovative methods to reduce costs while continuously improving quality. The company has implemented several disease management plans. However, no plans have yet been implemented to manage diabetic foot complications, many of which are preventable yet cost PacifiCare® up to 13.9 million dollars per year.

# Literature Review

### Diabetes

The prevalence of diabetes in the United States is 5.9 percent, representing 15.7 million people (American Diabetes Association, 2001). The rate in Texas is higher, at 6.3 percent (National Center for Health Statistics, 2001). Diabetes is a chronic disease that negatively impacts many organs and structures throughout the body. The foot of a diabetic can be damaged by changes in the neurologic and vascular systems that serve it. Specifically, nerves that supply the foot can become nonfunctional leading to numbness and the blood vessels that carry nutrients and oxygen to the foot can become blocked leading to a decreased ability to heal and fight infection. The resulting changes in the

foot can lead to ulceration (which is a defect or hole in the skin), infection, and ultimately death if not treated quickly and appropriately.

Diabetic foot complications are the most frequent cause of hospitalization for diabetics, linked to twenty percent of inpatient diabetic admissions (Halpin-Landry & Goldsmith, 1999, and Holzer, et al., 1998). In its 61<sup>st</sup> session, the American Diabetes Association estimated that diabetic patients have a fifteen percent lifetime risk for developing a foot ulcer and have a 15 to 40 times higher risk of lower extremity amputation than non-diabetics (Frykberg, 2001). Each year two to three percent of diabetic patients will develop a lower extremity ulcer (Reiber, Lipsky, & Gibbons, 1998). Further, the likelihood of amputation rises 3.19 to 3.56 times if a lower extremity ulcer is present (Moss, Klein, & Klein, 1999). The cost of treating diabetic foot complications is enormous. In 1995, Medicare spent 1.5 billion dollars for the treatment of lower extremity ulcers alone (Harrington, Zagari, Corea, & Klitenic, 2000). The event cost for lower extremity amputations, defined as the direct cost of those resources used for both acute treatment and follow-up treatment for one year, was estimated at 26,894 dollars (O'Brien, Shomphe, Kavanagh, Raggio, Caro, 1998). The two year cost of a lower extremity ulcer was estimated at 27,987 dollars (Harrington, Zagari, Corea, & Klitenic, 2000).

Prevention is widely accepted as the method that can have the greatest impact on lower extremity/foot complications in diabetic patients (Halpin-Landry & Goldsmith, 1999, Frykberg, 2001, Gibbons, 1996). In fact, foot exam rates are part of the Healthy People 2010 targets. The target rate for diabetic foot exams is 75 percent of all diabetics annually; in a survey of diabetics, patients reported that a foot exam was performed 55

percent of the time (Morbidity Mortality Weekly Report, Oct 27, 2000). However, routine foot examination rates have been reported to be as low as 12 percent (Gibbons, 1996). The implementation of a standardized foot examination protocol and risk classification system is needed to meet the Healthy People targets and to decrease the morbidity and mortality associated with diabetic foot complications.

A comprehensive foot risk classification system has been proposed by Harkless & Michel, (2001). Using this system, patients can be stratified into eight risk categories depending on history and examination findings (Appendix A). Four categories describe the risk for ulceration and four categories describe the risk for amputation. Treatment recommendations depend on the risk category and the type of wound, if present. Foot wounds are categorized based on depth of wound and presence or absence of infection, ischemia, or both (Appendix B). Using this system, providers can employ an easy to use tool to aid in the risk stratification of diabetic patients and improve outcomes through appropriate treatment and prevention.

Apelqvist and Larsson (2000) report that several studies show that the amputation rate in diabetics can be reduced up to 50 percent using a multidisciplinary team to perform regular inspection and prevention. A 1998 study indicated that the potential three-year economic benefit of amputation prevention strategies was 2-3 million dollars per ten thousand diabetic individuals (Ollendorf et. al, 1998). A study of African-American diabetic patients enrolled in a diabetes foot program, when compared to diabetic patients not enrolled in a foot program, at the Louisiana State University Health Sciences Center showed a 49 percent reduction in foot ulcer days, an 89 percent reduction in hospitalizations, a 90 percent reduction in hospital days, an 81 percent

reduction in emergency room visits, a 57 percent reduction in antibiotic prescriptions, an 87 percent reduction in foot operations, and a 79 percent reduction in lower extremity amputations (Patout, Birke, Horswell, Williams, Cerise, 2000). In a study of Medicare data, patients who received routine podiatric care were nearly four times less likely to undergo a lower extremity amputation than those who did not receive those services (Sowell, Mangel, Kilczewski, & Normington, 1999). In this study, podiatrists provided more than 99 percent of the defined services.

After implementation of a podiatrist-based diabetic foot disease management program for a 16,046-member HMO group in San Antonio, Texas, foot complications reduced dramatically. The HMO group prospectively followed 2,738 diabetic patients for 26 months and compared outcomes data before and after implementation. The number of foot related hospital admissions decreased 35.7 percent, from 5.32 per 1000 members to 3.42 per 1000 members. Skilled nursing facility (SNF) admissions dropped 66.8 percent. The average inpatient length of stay for lower extremity admissions reduced from 4.85 to 3.86 days and the average SNF length of stay reduced from 9.00 to 6.52 days. The incidence of lower extremity amputations decreased from 125 per 10,000 members to 37.5 per 10,000 members, a 70 percent reduction. Spending on diabetic lower extremity care dropped 50 percent and total spending on diabetic care dropped 6.8 percent (unpublished data). The data prove that a successful diabetic foot disease management program can be achieved, improving quality of life and reducing healthcare expenditures. However, the implementation of a successful disease management program depends primarily on effective marketing.

# Marketing

Marketing is defined as the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives (Bennett, 1995). Marketing efforts are further directed by the marketing concept. This concept is illustrated when a company takes a customer's needs orientation and reinforces that with "integrated marketing efforts aimed at generating customer satisfaction as the key to satisfying organizational goals (Kotler, 1984)." Inherent in the marketing definition are many implicit and explicit factors. The four essential pieces of the marketing mix, also referred to as the four P's of marketing, are mentioned explicitly. These are the product (ideas, goods, and services), price, promotion, and place (distribution) of the exchange. The satisfaction of individual needs indicates that the organization has some evidence about what its customers want or need. This implies that the organization has interacted with its customers, solicited feedback from them, and segmented the market to facilitate consumer satisfaction. The satisfaction of organizational needs implies that the marketing concept fits within its organizational strategy. Finally, planning and execution indicate that a plan of action has been undertaken to guide and monitor the marketing process.

### Marketing Mix

The healthcare marketing mix has been defined in several ways. When applying the traditional marketing mix to healthcare, the product is the service provided, price is the cost of the service to the consumer, promotion is the method by which the consumer is made aware of the service and place is the location in which the customer is served. However, O'Malley (2001) identifies a broader mix of variables that can be included in

the healthcare marketing mix that he calls the 10 P's of healthcare marketing. These include: 1) people, referring to the employees and healthcare providers, 2) product, 3) profitability, 4) productivity, 5) points (of access to the service), 6) pricing, 7) promotion, including education, promotion, and advertising, 8) patients, 9) perceptions (of the target audience), and 10) proactivity, the ability of the organization to stay ahead of the game. The marketing mix according to Cooper (1994) describes four different elements to be included in the healthcare marketing mix – cost/consideration, access/availability, promotion, and service development/elimination. Cost/consideration describes the contractual relationship between the consumer and provider in which the consumer gives up something of value, including money, time, opportunity, etc., in exchange for health care services. It also includes the cost of developing the service and its potential return. Access/availability replaces place and describes the ability to bring the service to the consumer. Promotion focuses on public relations, health education, atmosphere, and incentives. Finally, service development and elimination replaces product development (Cooper, 1994). No matter which variables one includes in the marketing mix, they must be directed toward the customer's needs, wants and expectations.

### **Customer Satisfaction**

Effective marketing begins by recognizing customer needs. The organization should then work to produce goods and/or services to satisfy those needs (Peter & Donnelly, 1997). Levitt (1975) distinguishes between selling and marketing by pointing out that selling focuses on the needs of the seller and his need to make money while marketing focuses on the needs of the buyer and satisfying those needs with a product. Marketing research is an integral part of the decision making process that can deliver

information about customers' needs (Peter & Donnelly, 1997). Marketing research is the function that links the consumer to the marketer through information that guides and monitors the marketing process and reduces the risk inherent in decision making (Peter & Donnelly, 1997). One output of market research is market segmentation. Segment management allows the organization to focus on the needs and wants of a particular subset of customers. A market segment consists of individuals who have enough in common to be treated the same and differ enough to be treated differently from the remainder of the population; services are developed specifically to meet the need and expectations of the segment members. In doing so, the organization promotes commitment reinforcing contacts between itself and its members (MacStravic, 1989). A further refinement of segment management is customer management. If the organization can identify and properly respond to individual customer needs, wants, and expectations, the organization can improve the individual's commitment to the organization (MacStravic, 1989).

A recent study on health maintenance organizations (HMOs) identified the relationship of various marketing components to enrollee satisfaction (Dwore, Murray, Parsons, & Gustafson, 2001). The study found statistically significant relationships between enrollee satisfaction and provider quality, access, waiting time, customer service, and disease prevention or health promotion programs. Of significance to the present study, the researchers found that HMOs with promotional and educational programs, disease management programs and health screenings, and those HMOs that send reminders to enrollees have higher enrollee satisfaction, alpha less than .01, than HMOs that do not. They also found that the provision of a nurse/health information

telephone number and National Committee for Quality Assurance (NCQA) accreditation did not increase enrollee satisfaction. In relation to the NCQA finding, the authors note that a marketing gap exists; while patients want cost-effective, quality health care, they rely more on personal experience and word of mouth than on data driven health plan report cards (Dwore, Murray, Parsons, & Gustafson, 2001). Once consumers' needs have been identified and studied, the organization can then determine how best to address those needs within its overall strategy.

The marketing function and organizational strategy are closely intertwined. Just as marketing relies heavily on recognizing customer needs, so too does organizational strategy. Marketing input is necessary in formulating organizational plans, from the strategic plan to product and functional plans (Kotler, 1984). Health care providers are increasingly using market research as a means of assessing their internal and external environments (Peltier, Kleimenhagen, & Naidu, 1996), a key element of strategic planning. Conversely, the completed strategic plan facilitates the development of marketing plans (Peter & Donnelly, 1997). Indeed, Ames (1968) points out that one of three major pitfalls to marketing is a failure to fit the marketing concept to the organization. The marketing concept provides focus on the consumer for integrating the efforts of the company (Cooper, 1994).

# Planning

Marketing planning confers several benefits to the organization: more systematic thinking, better coordination, clearer objectives, and improved performance measurement (Kotler, 1984). The literature is replete with outlines for various marketing plans, ranging from strategic to operational. Kotler (1984) describes eight sections for a

complete marketing plan: executive summary, current marketing situation, opportunity and issue analysis, objectives, marketing strategy, action programs, projected profit-loss statement, and controls. A more streamlined version is offered that includes just three sections – marketing objectives, target markets, and marketing mix (Peter & Donnelly, 1997). Another plan includes the following five components: situation analysis, problem and opportunity statement, statement of objectives, action plan recommendation, and statement of expected results (Dolan & Silk, 1984).

MacStravic (1999) described a loyalty marketing plan to increase consumer loyalty to the organization. The plan forms a wheel composed of two value chains, each composed of five steps. The value delivery chain begins by learning what consumers' value, determining the expectations and wishes of consumers, and gathering information that helps build customer loyalty. The second step, manage value delivery, translates the consumer knowledge gained into a new service or an improvement to an existing service. Included in this step is the identification of the target market, service design and distribution, and execution. The third step is to promise value to the consumer by creating confident expectations that they will gain value by using the service. Step four tracks the value delivered by monitoring the satisfaction with the service. Finally, step five is to remind consumers of the benefits gained from the experience. The other half of the loyalty wheel is the return value chain. The first step of this chain is to evaluate customer loyalty, or the value gained by the organization. In this step the company assesses the extent to which consumer groups provide value to the organization. Step two is to promote return value contributions by encouraging customers to contribute to the organization. Contributions can take the form of donations, suggestions, use of

services, or referrals. The third step is to monitor returned value. Step four recognizes returned value through acknowledgement of consumer contributions. Finally, step five shares the value gained by the organization with consumers. MacStravic (1999) cautions that the marketing effort cannot end with one iteration of the marketing wheel, but that a continuous repetition of all steps and loyalty to consumers is required for success.

Hillestad and Berkowitz (1991) offer a six-step strategy to action plan. The first step is to establish a mission, whether an organizational mission or a functional mission. The next step is an internal and external assessment, including assessments of the environment, market, competition, and internal capabilities. Step three is the strategy-action match that connects the overall strategy to the actions required with the elements of the marketing mix. This step compares the stages of the product life cycle with the

Figure 1. Strategy Action Mix Matrix

			Marketplace	Life Cycle	
		Introduction	Growth	Maturity	Decline
	Decline				Drop
ife Cycle	Maturity			Maintenance	Harvest
Product Life Cycle	Growth		Differentiate	Necessity	Niche
	Introduction	Go-for-it	Differentiate	Necessity	Niche

market life cycle and uses a matrix to determine one of seven strategies: 1) go-for-it, 2) differentiate, 3) maintenance, 4) necessity, 5) drop, 6) harvest, or 7) niche (see Figure 1). The fourth step determines marketing actions or tactics for each of the elements of the marketing mix. Integration of the new marketing plan into the organization to ensure organizational fit and balance of activity comprises step five. The final step is plan approval and monitoring the execution of the plan. All of these plans differ structurally. However, all answer the same three basic questions proposed by Dolan and Silk (1984):

1) Where are we now? 2) Where do we want to go? 3) How do we get there?

## **Ethics**

Healthcare professionals who claim that marketing in healthcare is unethical have resisted healthcare marketing. The criticisms leveled against marketing include the idea that it is intrusive, manipulative, creates unhealthy competition, and creates unnecessary demand (Hammond & Jurkus, 1993). Hammond & Jurkus (1993) write that "the marketing concept with its emphasis on determining needs and providing the desired outcomes for each consumer/stakeholder would seem to present an ethical imperative that cannot be denied." Therefore, if the marketing concept is applied truthfully and honestly, said application should be considered ethical. Hunt & Vitell (1986) in their positive model of marketing ethics consider both deontological and teleological evaluations important in the decision making process regarding ethical judgments. Robin & Reidenbach (1987) stress that organizations include the concerns of all stakeholder groups when formulating a marketing strategy. The American Marketing Association's code of ethics basic rule directs marketers "not knowingly to do harm (American Marketing Association, 2001)," and posts a complete code of ethics on their web-site as

well as sending a copy to every member. Goldman (1993) proposes four ethical principles for hospital marketing efforts that can easily be applied to any healthcare segment, including managed care. These four principles are: 1) put the patient's welfare first, 2) avoid unnecessary services, 3) maintain high standards of honesty and accuracy, and 4) be accountable to the public. The bottom line in healthcare marketing ethics, as for all ethics, is honesty and fairness.

# Purpose of Study

The purpose of this study is to develop a marketing plan to address the foot care needs of the diabetic market and lower the cost of medical care.

# Methods and Procedures

Several marketing plan structures were introduced in the literature review; however, all address the basic tenants of marketing. The marketing plan design employed to promote this disease management program will be the six step plan proposed by Hillestad and Berkowitz (1991), modified to include the marketing mix elements described by Cooper (1994) instead of the traditional 4 P's. This method was selected for its ease of use, relative simplicity, and focus on the marketing mix. The substitution of the Cooper (1994) marketing mix more closely reflects PacifiCare's position as a health plan rather than a direct service provider. The plan structure is outlined in Figure 2. The mission statement developed as part of this study will be functional in nature rather than strategic. It will relate to the project at hand rather than replace the organization's overall mission statement. An effective mission statement will focus on the market rather than the product, be achievable, motivating, and specific (Hillestad & Berkowitz, 1991). The internal assessment will

Figure 2. Marketing Plan Model

Step 1. Establish Mission Statement	
Step 2. Internal/External Assessment	Environment Market Capabilities Competition
Step 3. Strategy Action Match	Marketing Objectives
Step 4. Determine Marketing Tactics	Cost/Consideration Access/Availability Service Development Promotion
Step 5. Integrate Marketing Plan	
Step 6. Monitor and Adjust	

focus on the abilities of the organization to bring the service to the consumer and support the use of the service. The external assessment will include a review of the market, to include the target audience, the position of the competition with regard to their use and ability to employ a similar program, and the healthcare environment with regard to diabetes disease management. The strategy action match will determine the location of the service and market in relation to their respective life cycles, and identify a strategy for the service. It will also address specific criteria for each of the marketing variables and determine objectives to be monitored in the final step. Marketing tactics for each of the marketing mix elements will then be outlined, indicating how the different functions within the organization will carry the service to the consumer. The plan will then be assessed for its fit with the overall mission of the organization to ensure it does not overlap or compete with other plans or cause redundancy in the organization. Finally,

mechanisms will be developed to monitor the service, paying specific attention to the objectives developed in step three.

## Marketing Plan

# Step 1. Mission Statement

The functional mission statement for this plan was established using PacifiCare's corporate mission statement, vision, and values (Appendix C). There are two overarching themes - making peoples lives better and creating shareholder value. Consistent with these tenants, the mission statement is "To promote an effective and efficient, customer friendly diabetic foot screening and treatment program to improve the health of our diabetic patients." Although succinct, this mission statement addresses all the elements in the corporate mission statement. Health improvement and customer satisfaction have been emphasized through explicit reference, while cost savings is also indirectly included by referring to effectiveness and efficiency.

## Step 2. Internal/External Assessment

#### Environment

PacifiCare's medical management team has recommended that this project be pilot tested in the North Texas (Dallas) market. The macro-level healthcare issues in the North Texas market are similar to those throughout the US. A public that demands more effective healthcare, the advancement of healthcare technology, and an aging population are all driving the cost of healthcare higher. In addition to this, the healthcare model throughout PacifiCare's line of business is changing. Through 2000, capitation accounted for up to 80 percent of their business. However, beginning in 2001, the capitation system began to disintegrate when several of the capitated medical groups entered into

insolvency. Now, less than 20 percent of PacifiCare's business in the North Texas market is under capitation. As a result, member utilization rates and the increase in healthcare costs now more directly impact PacifiCare's finances.

### Market

The North Texas market has a total population of 3.27 million people and is projected to grow 9.7% over the next five years. The age distribution of this population is reported in Table 1. There are 23 Health Maintenance Organizations (HMO's) with a total of 547,871 members, resulting in a 16.8 percent HMO penetration rate. PacifiCare of Texas<sup>®</sup> has 20 percent of the commercial HMO market with membership of 103,558 and 41.9 percent of the Medicare + Choice HMO market with membership of 66,231. Of the total 169,797 PacifiCare<sup>®</sup> members, 34,400 (20.3%) have

Table 1. North Texas Market Demographics.

Age Group	Population	Percent
9 and under	510,028	15.6%
10-17	371,795	11.4%
18-24	298,494	9.1%
25-34	547,590	16.7%
35-44	556,763	17.0%
45-54	430,154	13.2%
55-64	257,976	7.9%
65+	297,183	9.1%
Total	3,269,983	100%

diabetes, far higher than the national and state average, possibly indicating adverse selection. With the recent downturn in the economy and decrease in employed workers, the HMO market can be expected to contract in the short run.

Diabetes Mellitus was the second most common ambulatory diagnosis for both male and female adults and senior citizens. However, only approximately 20 percent of those with diabetes are enrolled in a diabetes disease management program. Due largely to capitation arrangements and a lack of data transfer between capitated groups and PacifiCare<sup>®</sup>, inpatient data for 2000 is available for only 47 percent of diabetic members in the North Texas market. Total hospital admissions and cost for this 47 percent are 32,612 and \$5,854,427, respectively; there were 29 lower extremity amputation procedures in this group, with a direct cost of \$10,919 each. However, the total first year cost of lower extremity amputations is estimated to be \$26,894 each. Extrapolating this out to include all diabetic members in the North Texas market equates to 68,412 diabetes-related admissions for a cost of \$12,281,155, and 61 lower extremity amputations at a cost of \$1,640,530, totaling \$13,921,685. There are 143 podiatrists, located throughout the market, who contract with PacifiCare<sup>®</sup>.

# Capabilities

PacifiCare® has inherent within its current operations the internal capabilities to start a diabetic foot disease management program: utilization management, claims, information services, medical management, quality improvement, marketing and sales, and customer service. Although all the necessary functions exist, additional resources will be needed to sufficiently staff an effective operation. Two nurses with a support staff to promote and monitor patient usage will be needed to start the program, and

patient education services would have to be contracted out. Hiring a vendor or contractor is an alternative to running a disease management program internally. The disease management programs that PacifiCare® currently operates are all run by outside vendors.

# Competition

Only one of PacifiCare's competitors offers a disease management program focused on the prevention of diabetic lower extremity complications. Humana offers its San Antonio and Corpus Christi diabetic members registration with Diabetex<sup>®</sup>, a disease management vendor. Diabetex<sup>®</sup> screens diabetic members for lower extremity risk factors, stratifies the population, and delivers risk based treatment protocols. Outcomes of this program were reported in the literature review (above). Diabetex<sup>®</sup> introduced its program into the San Antonio market in 1999 and Corpus Christi in 2001. I can find no other evidence of a focused diabetic foot disease management program in Texas, including the North Texas market. However, there is no reason to believe that any of PacifiCare's competitors would not be in a position to utilize a similar program.

# Step 3. Strategy Action Match

Disease management programs continue to grow in popularity and number. Most, if not all, HMO's provide disease management programs for diseases that are costly and prevalent. A few examples are asthma, congestive heart failure, diabetes, and coronary artery disease. Therefore, the disease management market can be considered to be in the growth phase of its life cycle. However, a disease management program focused on preventing lower extremity complications in diabetic patients is new to the marketplace, placing it in the introductory phase of the life cycle. Since both a PacifiCare® diabetic foot management program and the market for a diabetic foot management program are in

the introductory phase of their respective life cycles, a go-for-it strategy should be pursued if they decide to enter this market.

# Marketing Objectives

The following objectives are based on the empirical experience of Diabetex® vendor operations in south Texas over the last three years:

- Thirty-five percent of diabetic members using program within one year of implementation.
- 2. Seventy-five percent of diabetic members using program within two years of implementation.
- Seventy percent reduction of incidence of diabetic lower extremity amputations within two years.
- 4. Fifteen percent reduction in diabetic foot costs within one year.
- 5. Fifty percent reduction in diabetic foot costs within two years.
- 6. 6.8 percent reduction of total diabetic spending within two years.

# Step 4. Determine Marketing Tactics

### Cost/Consideration

The start-up cost for developing this program may be substantial. Hiring two nurses trained in disease management, employees to track patients, adapting existing disease management software, the cost of promotion to both physicians and patients, and the additional work allocated to existing departments create a financial barrier that needs to be overcome. The expected return on investment is also substantial, 50% of total diabetic lower extremity spending each year after the program is fully implemented.

Based on the Diabetex® experience, I have estimated savings of 12.5% for the start-up

year. Table 2 provides a breakdown of the cost estimates and the expected return on investment. If an outside vendor such as Diabetex<sup>®</sup> is utilized, the cost, at \$330 per

Table 2. Anticipated Costs and Return (2 years).

Cost of 2 Nurses (2 years)	\$240,000
Cost of 3 support staff (2 years)	\$180,000
Software (1 time cost)	\$50,000
Promotion/Education	\$25,000
Allocated Costs (2 years)	\$50,000
Provider visits (35% usage 1 <sup>st</sup> year)	\$1,083,600
Provider visits (75% usage 2 <sup>nd</sup> year)	\$2,322,000
Total Cost	\$3,950,600
Expected Savings	
(.125 + .50)*13,921,685	\$8,701,053
Expected Net Return on Investment	\$4,750,453

Commercial diabetic member and \$499 per Secure Horizons diabetic member, becomes prohibitive (see Appendix D)

# Access/Availability

One of the tenants of the go-for-it strategy is tight quality control to ensure a consistent and high quality product, maximizing customer satisfaction (Hillestad and Berkowitz, 1991). The literature has consistently shown that preventive foot care delivered by podiatrists is a cost-effective method to prevent diabetic foot complications. Podiatrists are specifically trained to recognize the early signs of diabetic foot disease and are therefore the most qualified to provide the disease management services for this program. In a further attempt to ensure tight quality control, access in the early stages of

this program should be limited to those podiatrists who are motivated to succeed and who have shown consistently high marks with regard to patient satisfaction and effectiveness. Tight quality control can be most assured by standardizing the service; using the University of Texas Foot Risk and Wound Classification systems (Appendix A and B) will standardize the service between podiatrists, allow for maximum efficiency, and aid the monitoring phase. Once the program is in place and running smoothly, expansion to the rest of the podiatry network should occur quickly to maximize market penetration.

# Service Development/Elimination

Service development should be proactive rather than reactive. A proactive approach allows market research and planning to take place as part of a structured process: determine consumer needs and design a system to deliver a service to meet those needs. Investment in marketing research, development of a high quality service, and focused promotion can result in an effective and efficient service and result in significant returns. However, for effective service development to occur, improved information collection and management will be required. Claims information for over fifty percent of the diabetic members in the North Texas market could not be determined. Part of the problem with data collection lies in the old capitation method wherein medical groups kept data for their members but did not forward complete information to PacifiCare<sup>®</sup>. Accurate, complete, and timely data collection will be key elements to implementing a successful disease management program. Service elimination should also be considered if the service no longer fits the corporate mission or is not achieving its goals. A comprehensive monitoring plan, described below, can help signal if a service needs to be adjusted or eliminated.

### Promotion

Promotion of a healthcare service to beneficiaries is different than promoting a product or service to the general population. When the target market is small, a targeted promotion strategy is more cost-effective. A two-pronged approach directed at both patients and physicians should provide the most cost effective coverage of the target market. Therefore, an integrated direct mail campaign with telephone follow-up to both promote the program and educate patients about the benefits should be implemented to maximize participation. In concert with patient promotion and education, physician education about the program and its benefits should increase usage. Examples of the letter sent to patients and providers are in Appendix E. In addition, patient letters, diabetes and diabetic foot care education pamphlets should be included in the promotion phase to emphasize the role that patient education plays in prevention. Further, the sales force can use the program to promote PacifiCare's overall HMO product to group and individual purchasers at contract renewal.

### Step 5. Integrate Marketing Plan

The marketing plan for any new service needs to be evaluated against the corporate mission and other services to ensure consistency with the mission and that there is no overlap between the new service and existing services. A diabetic lower extremity disease management program seems to fit with PacifiCare's mission, vision, and values. Although a diabetic disease management program already exists at PacifiCare®, there are no protocols within that program to measure or monitor diabetic lower extremity complications. However, many of the organizational functions and resources of these two programs will overlap. Therefore, a diabetic lower extremity disease management

program should be folded into the larger diabetes disease management program to take advantage of the resources already tasked to monitor and track diabetic patients.

# Step 6. Approval and Monitoring

This is the final step in development and the initial step in implementation. If management selects this plan as part of its business portfolio, monitoring the progress of the plan will be essential to verifying success. Two of the most important variables to monitor are return on investment and patient satisfaction. As with any new program, an initial investment will yield limited returns early in the process. Monitoring the fixed and variable costs versus the reduction in diabetic spending should show positive gains within 12-18 months. A robust tracking tool to monitor claims submission and payment will provide the necessary utilization and cost information. Another important variable to monitor is member satisfaction. Member surveys and telephone contacts with members utilizing the program will identify shortfalls in the program that will need to be addressed immediately if the program is to be successful. Two other important variables to measure are physician utilization and satisfaction with the program. Physician input regarding protocols and a proactive physician contact program will be needed to maintain successful service delivery. Utilization management and medical management functions will need to monitor physician usage and compliance to identify under- and over-users of the program, and to ensure the right services are directed to the right members. If the program fails to provide the necessary results after two years, the plan should either be terminated or contracted out to a vendor.

#### Conclusion/Recommendations

Healthcare marketing, in its infancy only a decade ago, is now feeling the pain associated with any trial and error growth period. One example is the consumer and physician criticism associated with prescription drug advertising. Many healthcare managers still poorly understand marketing. The healthcare market changes so rapidly and sometimes unexpectedly, that healthcare executives often find themselves reacting to situations rather than controlling, or at least anticipating, them. The most effective method to adapt and survive in any market is to have an effective and operational strategic plan that produces a product or services that satisfies consumer wants and/or needs. An integral part of strategic planning is marketing. Marketing is the interface between the organization and the consumer. Discovering consumer wants and needs tells the organization what line of business is most likely to be lucrative. In the case of an HMO, marketing can obtain the consumer information that is essential to keeping healthcare costs down.

The development of a marketing plan to implement a diabetic lower extremity disease management plan is described herein. However, the methodology used can be applied to any program that an HMO or other healthcare organization might pursue to satisfy their customers. The key to success is to follow a method that provides information about the market. Rather than reacting to the situation, marketing attempts to predict changes in the environment and allow the executive to develop a response before a crisis ensues.

This marketing plan identifies a need within a subsection of PacifiCare's beneficiary population; its diabetic members. Diabetics make up a large portion of

PacifiCare's Texas population - larger than the national average - and this population is growing. As the diabetic population grows and the cost of providing ever more advanced care rises, the cost of providing healthcare to them will grow disproportionately. The cost of lower extremity care was discussed in the literature review and partially exposed with the limited data that PacifiCare® has in its database. The ability to curb those costs has been repeatedly demonstrated in the literature. The final step for PacifiCare® is to determine if and when to implement a plan to improve the health of its members and restrain the cost of diabetic lower extremity care. The medical management team has recommended that this plan be tested in the North Texas market. If the program proves valid, it should be implemented across the state of Texas and in any other area that market research identifies a need.

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# Appendix A. University of Texas Foot Risk Classification System

Category 0: No Neuropathy

Patient Diagnosed with Diabetes Mellitus

Protective sensation intact ABI's, toe pressures normal Foot deformity may be present No history of ulceration

Treatment:

1 1 1 1

Possible shoe accommodations

Patient education

Follow-up every 6-12 months

Category 2: Neuropathy, with Deformity

Protective sensation absent ABI's, toe pressures normal No history of ulceration No history of neuroarthropathy Foot deformity present

Treatment:

Custom molded, extra-depth shoes Possible prophylactic surgery

Patient Education

Follow-up every 2-3 months

Category 4A: Neuropathic Wound

All UT Stage A wounds (see Appendix B)

Protective sensation absent ABI's, toe pressures normal Foot deformity present No acute neuroarthropathy

Treatment:

Wound care regimen Pressure reduction program Possible surgical intervention

Patient Education

Frequent follow-up visits

**Category 5: Infected Diabetic Foot** 

All UT stage B wounds (see Appendix B) Protective sensation may be present

Infected wound

Neuroarthropathy may be present

Treatment:

Debridement of infected, nonviable tissue and/or

bone as indicated

Possible hospitalization, antibiotic regimen

Medical management of diabetes

Category 1: Neuropathy, No Deformity

Protective sensation absent ABI's, toe pressures normal No history of ulceration No history of neuroarthropathy

No foot deformity

Treatment:

Possible shoe accommodations

Patient education

Follow up every 3-4 months

Category 3: History of Pathology

Protective sensation absent ABI's, toe pressures normal

History of ulceration, amputation, or

neuroarthropathy
Foot deformity present

Treatment:

Custom molded, extra-depth shoes Possible prophylactic surgery

Patient Education

Follow-up every 1-2 months

Category 4B: Acute Charcot Joint

Protective sensation absent ABI's, toe pressures normal

Noninfected neuropathic ulceration may

be present

Diabetic neuroarthropathy present

Treatment:

Wound care regimen if ulcer present

Pressure reduction program

Thermometric and radiographic monitoring

Patient Education

Frequent follow-up visits

Category 6: Ischemic Limb

All UT stage C & D wounds (see Appendix B)

Protective sensation may be present

ABIs, toe pressures, transcutaneous oxygen

measurements abnormal Ulceration may be present

Treatment:

Vascular Consultation, possible re-vascularization

If infection present, treatment same as for

Category 5

ABIs = Ankle Brachial Indexes

UT = University of Texas

Appendix B. University of Texas Diabetic Wound Classification System

			GRAI	)E	
		0	1	2	3
	A	Pre- or post- ulcerative lesion completely epithelialized	Superficial wound not involving tendon, capsule or bone	Wound penetrating to tendon or capsule	Wound penetrating to bone or joint
STAGE	В	With Infection	With Infection	With Infection	With Infection
ST	С	With Ischemia	With Ischemia	With Ischemia	With Ischemia
	D	With Infection and Ischemia	With Infection and Ischemia	With Infection and Ischemia	With Infection and Ischemia

From Lavory LA, Armstrong, DG, Harkless, LB. JFAS. 35: 528-531, 1996

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Appendix C. PacifiCare's Mission Statement, Vision, Values

Mission Statement: Create long-term shareholder value as a leading health and consumer services company committed to making people's lives healthier and more secure.

Vision: We are a health and consumer services company making people's lives better.

## Values:

1 2 1 1 1

- Integrity We will honor our commitments and endeavor to ensure that they are fair and contribute to the welfare of our constituents. We will always strive to make the right choices.
- Businesslike We will have a bias toward action and innovation, and we assume
  accountability for our results. We will strive to make decisions as close to the
  customer as possible.
- Customer We will attract, retain and reward talented, hard-working, team-oriented individuals who put our customers first and take prudent risks.
- People We will respect and recognize those employees and institutions that demonstrate and exemplify our values.
- Quality We will establish a position as a recognized industry leader in innovation
   and quality whose members benefit from superior clinical, service and cost outcomes.

# Appendix D. Cost of Diabetex® in North Texas Market

# 34,400 Diabetic Members

\* \* \* \* \* \*

20,737 Commercial members @ \$330/year	- \$6,843,210
13,662 Secure Horizons members @ \$499/year	- \$6,817,330
Total Cost per year	- \$13,660,548
Total Cost for two years	- \$27,321,096
Expected Savings (2 years) (see Table 2)	+ \$8,701,053
Net Return	(\$18,620,043)



# Appendix E. Promotion Letters

#### Letter to Patients

Dear Member,

Por favor llame al 800-825-9355 si desea obtener información sobre la diabetes en español.

Diabetes is the leading cause of amputations. Early diagnosis and treatment of diabetic neuropathy may reduce your chances of losing a leg by 60%.

PacifiCare believes there are certain things that we can do together to ensure your good health. If you have diabetes, it's important for you to have your feet examined at least once a year, even if they appear normal. Diabetes can damage tiny blood vessels and cause a loss of sensation in the feet. This condition is called diabetic neuropathy.

If you haven't had your feet examined by a podiatrist in the past year, PacifiCare wants to help. You may now go directly to any PacifiCare contracted podiatrist <u>once a year</u> for an annual Diabetes Foot Screening. Enclosed is a listing of the PacifiCare contracted podiatrists who are participating in your area, and educational pamphlets so that you can take charge of your health.

The PacifiCare contracted podiatrist can answer additional questions you may have about foot care. The podiatrist will provide your Primary Care Physician with a report of your examination and any recommendations for further care. Please return to your Primary Care Physician for a referral if your podiatrist recommends further examinations or treatments.

PacifiCare/Secure Horizons welcomes this opportunity to work with you and your doctor to help you enjoy the best possible health. If you have any questions about this letter or the Taking Charge of Diabetes program, please call Bridget Hoog at 210-478-4202.

To Your Good Health,

Naim Munir, M.D. Chief Medical Officer PacifiCare of Texas

**Enclosures** 

# Letter to Primary Care Physicians

Dage	DL.	· · · · · · · ·	
Dear	$\Gamma \Pi \gamma$	ysician	

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PacifiCare of Texas is in the process of implementing a Diabetic Foot Disease Prevention Program in the Dallas/Fort Worth market to begin \_\_\_\_\_\_\_. This pilot program will determine the effectiveness of podiatric preventive care on diabetic foot complications. As part of the study, diabetic members who are with directly contracted physicians will be able to self refer to podiatrists for annual screenings only. A referral from the patient's primary care provider will still be required to implement a diabetic foot preventive treatment regimen, if required, and for any elective care. PacifiCare will follow the incidence of foot complications, including ulcers and lower extremity amputations.

This program is not intended to replace you as the primary provider but an expansion of benefits to our diabetic patients in an effort to improve outcomes. Once one of our contract podiatrists sees your patient, he or she will send a summary of findings and preventive care plan based on a risk stratification process that has been normalized across the group of podiatrists. This will allow you to stay abreast of your patient's care, and provide a control mechanism by requiring a referral from you for any treatments you deem necessary.

As you well know, patient education is key to preventing complications related to diabetes. As part of the program, we are sending educational literature to our diabetic patients in order to impress upon them the importance of preventive care. With the intense care that you provide to your diabetic patients, we hope to remove the added burden of providing diabetic foot care and shift that burden to the specialist. With your support of the program, I am sure that together we can decrease the incidence of foot complications in our diabetic population.

Sincerely,

Naim Munir, M.D. Chief Medical Officer PacifiCare of Texas

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Enclosures

# Letter to Podiatrists

Dear Physician:
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Enclosed is a screening form that can be used at annual visits in addition to your own records. Also enclosed for your review is a synopsis of the University of Texas Foot Risk Classification System and the University of Texas Diabetic Wound Classification System. The sole intent of the forms is to normalize the risk stratification process across all participating podiatrists so that PacifiCare can better assess the impact that podiatric care has on your patients.
If you choose to participate in this program, you will be asked to send a copy of the form to the patient's primary care provider along with a dictated summary of your findings and preventive care plan. Participation is limited to those with existing direct contracts with PacifiCare and is voluntary. If you choose to participate, your name and contact information will be included with educational materials sent to our patients. If you would like to participate, please return the enclosed contract addendum to the address below by Thank you.
Thank you for your commitment to delivering the highest level of quality care to our members. Together we make lives better!
Sincerely,
Naim Munir, M.D. Chief Medical Officer PacifiCare of Texas

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Running Head: A MARKETING PLAN

A Marketing Plan for an HMO

Diabetic Foot Disease Management Program

by

Major Brian K. Stanton, DPM

March 2002

A Graduate Management Project

Submitted to the Faculty of Baylor University

In Partial Fulfillment of the Requirements

for the

Master of Healthcare Administration Degree

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### Abstract

PacifiCare of Texas® operates in an increasingly regulated and ever-changing environment. In order to provide effective and efficient healthcare to its beneficiaries, PacifiCare needs to undertake a marketing approach to the provision of care, including prevention programs. With an increasing diabetic population, and the rising cost of providing diabetic foot care, this market segment needs to be approached is a systematic way. The purpose of this study is to develop a marketing plan to address the needs of the diabetic market and lower the cost of medical care. A review of the literature revealed that a diabetic lower extremity prevention program could save up to 6.8% of total diabetic spending. A strategy to action marketing plan that addresses access, cost, promotion, and service development was developed. Market and internal data reveal that if a successful prevention plan can be implemented, diabetic lower extremity costs can be reduced over 7.5 million dollars in two years in the north Texas market alone. Finally, this marketing approach can be utilized to evaluate any potential project to improve services, reduce the cost of healthcare delivery and improve the overall health and well being of Pacificare's beneficiaries.



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